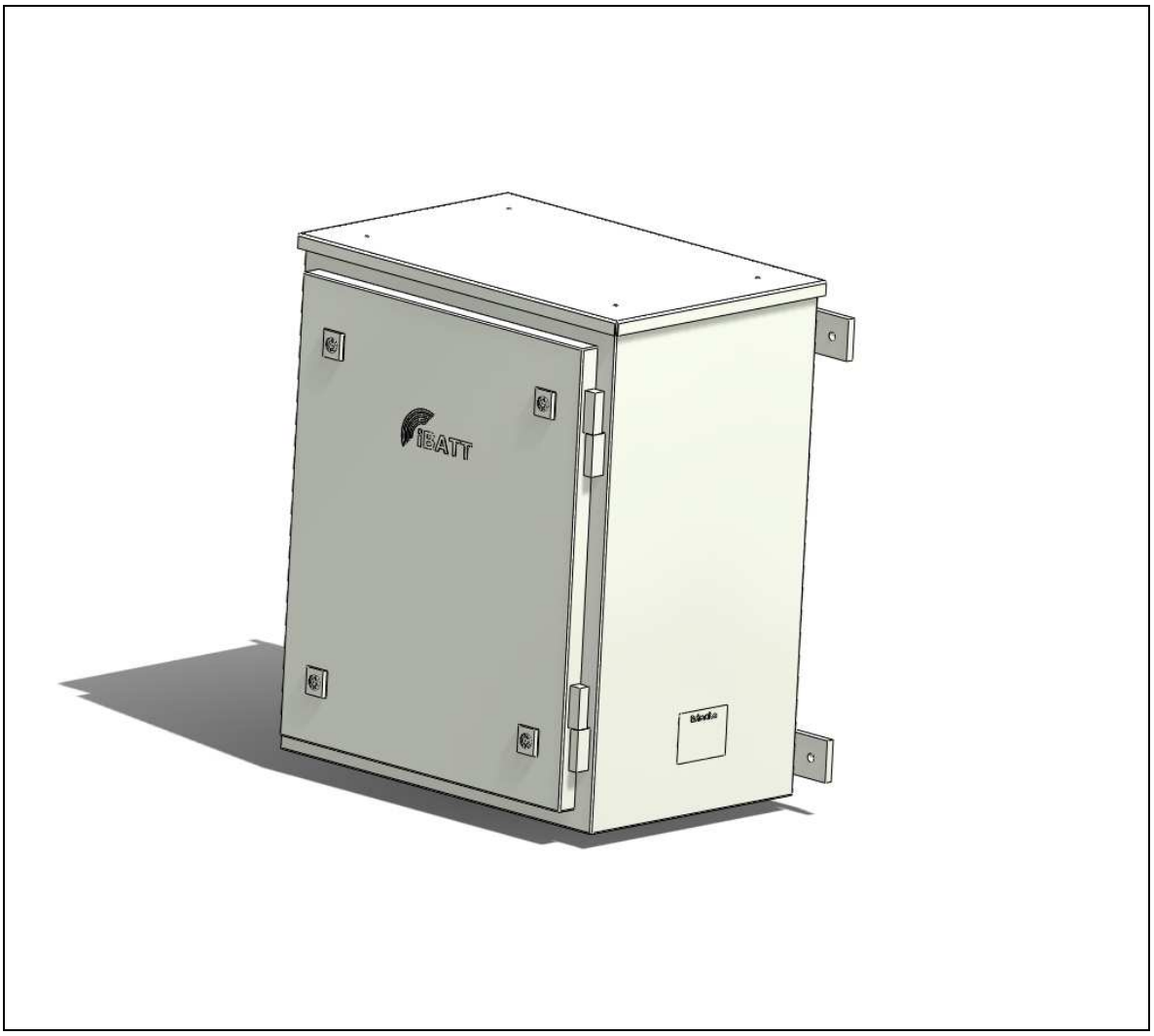
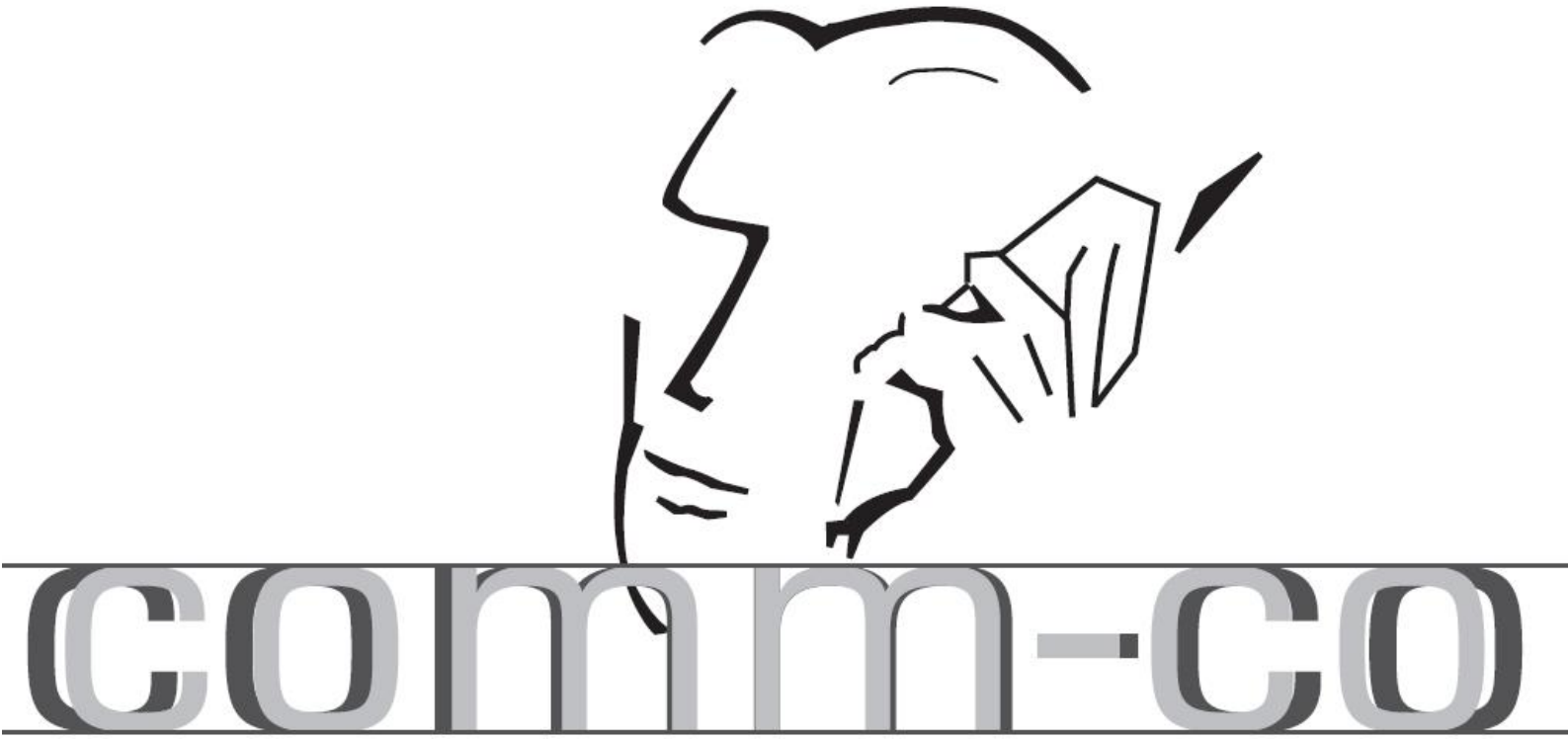
EXTRONICS



Installation & Operating Manual

iBATT100



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Document Number **331461** (See Last Page for Revision Details)

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Extronics reserve the right to change this manual and its contents without notice, the latest version applies.

Contents

1 Introduction 4
2 Safety Information and Notes 5
2.1 Storage of this Manual 5
2.2 List of Notes 5
3 Installation and Set-to-work 7
3.1 Installation 7
3.2 Fitting the Batteries 8
3.3 Fitting the Cables 9
3.4 Setting to work 9
4 Intended Purpose Usage 10
4.1 Transportation and Storage 10
4.2 Authorized Persons 10
4.3 Cleaning and Maintenance 10
4.4 Safety Precautions 10
4.5 Cleaning and Maintenance Intervals 10
4.6 Aggressive substances and environments 11
4.7 Exposure to external stresses 11
4.8 Lead Acid Batteries 11
5 Technical Data 12
5.1 Specification 12
6 Certification 13
6.1 Certification Label 13
6.2 ATEX Certificate 14
6.3 IECEx Certificate 16
6.4 EC Declaration of Conformity 19
7 Manual Revision 20

1 Introduction

The iBATT100 is an ATEX and IECEx approved wall mount stainless steel battery enclosure for use in Zone1 and Zone 2 hazardous areas. It is designed to be used in conjunction with the iUPS101 UPS system to provide an uninterruptible power supply. The iBATT100 can also be used independently providing the special conditions for safe use are applied as detailed on the ATEX / IECEx certificate.

When used in conjunction with the Ex ‘e’ certified charge protection circuit contained within the iUPS101 system, users are permitted to charge the two 12V 135Ah valve regulated lead acid batteries in a hazardous area. These batteries are maintenance free, and thanks to the temperature compensation circuitry within the iUPS101, they are charged within the manufacturers specified parameters regardless of environmental conditions.

2 Safety Information and Notes

2.1 Storage of this Manual

Keep this user manual safe and in the vicinity of the device. All persons who have to work on or with the device should be advised on where the manual is stored.

2.2 List of Notes

The notes supplied in this chapter provide information on the following.

- Danger / Warning.
  - Possible hazard to life or health.
- Caution
  - Possible damage to property.
- Important
  - Possible damage to enclosure, device or associated equipment.
- Information
  - Notes on the optimum use of the device

Warning	**Installation to be by skilled electricians and instructed personnel in accordance with national legislation, including the relevant standards and, where applicable, in accordance with IEC 79.17 on electrical apparatus for explosive atmospheres.**

Warning!	**The iBATT100 must only be operated in Zone 1 and Zone 2 hazardous area. Refer to the ATEX certificate for further information.**

Warning!	**If charging takes place in a hazardous area the charging circuits must meet the requirements of EN60079-0 and EN60079-7.**

Warning!	**Any load connected to the iBATT100 must include a 160A Fuse in the supply line. If the fuse is located in a hazardous area it must be suitably certified.**

Warning!	**If the batteries are to be disconnected in a hazardous area, then an appropriately certified means of isolation must be provided.**

Important	**The batteries must not be subjected to mechanical shock.**

Important	**The technical data indicated on the iBATT100 ATEX rating plate, in this manual and the ATEX certificate must be observed at all times.**

Important	**The ATEX rating label must be fitted at all times, if damaged it must be replaced immediately or the iBATT100 must be removed from service and the hazardous area.**

Important	**Changes in the design and modifications to the equipment are not permitted.**

Important	**The iBATT100 shall be operated as intended and only in an undamaged condition.**

Important	**Only suitably rated loads may be connected to the iBATT100.**

Caution	**This assembly may weigh up to 110Kg, therefore ensure the assembly is mounted using suitable fixtures.**

Caution	**Never operate the iBATT100 unit outside its rated voltage, current & power as indicated in the specification or the safety of the unit may be impaired.**

Caution	**Never exceed the maximum loading of the iBATT100 as stated in the specifications. Adequate protection such as a fuse / breaker must be fitted to connecting equipment to prevent exceeding maximum load.**

Important	**For the installation, maintenance and cleaning of the units, it is absolutely necessary to observe the applicable regulations and provisions concerned with explosion protection (EN60079-0:2009, EN 60079-14:2008) as well as the Accident Prevention Regulations.**

Important	**The iBATT100 must not be stored or operated outside of its rated temperature range as stated on the ATEX certificate.**

3 Installation and Set-to-work

3.1 Installation

The iBATT100 enclosure is supplied with two 12V 135Ah VRLA batteries.

The iBATT100 is a wall mount enclosure, and only permitted to be mounted in a vertical orientation – see fig 3.0.

The enclosure weighs approximately 20Kg, and each of the batteries weigh 46Kg so the appropriate health and safety requirements for lifting equipment must be taken to ensure safe installation.

Important!	**If replacing the batteries, only FEAM 12FLB500 12V 135Ah Batteries are permitted to be fitted in the iBATT100 enclosure.**

Correct Vertical Installation:

Company Info:
Comm-Co
Kreekzoom 9
4561 GX Hulst
The Netherlands
Tel: +3111 4-370030
Fax: +3111 4-370029
E-mail: Info@comm-co.com
Website: http://www.comm-co.com
Webshop: http://www.ecommshop.com
www.atexshop.com
www.ruggedshop.nl
www.webpainter.nl
www.wavecomblog.com
www.eyecctv.nl

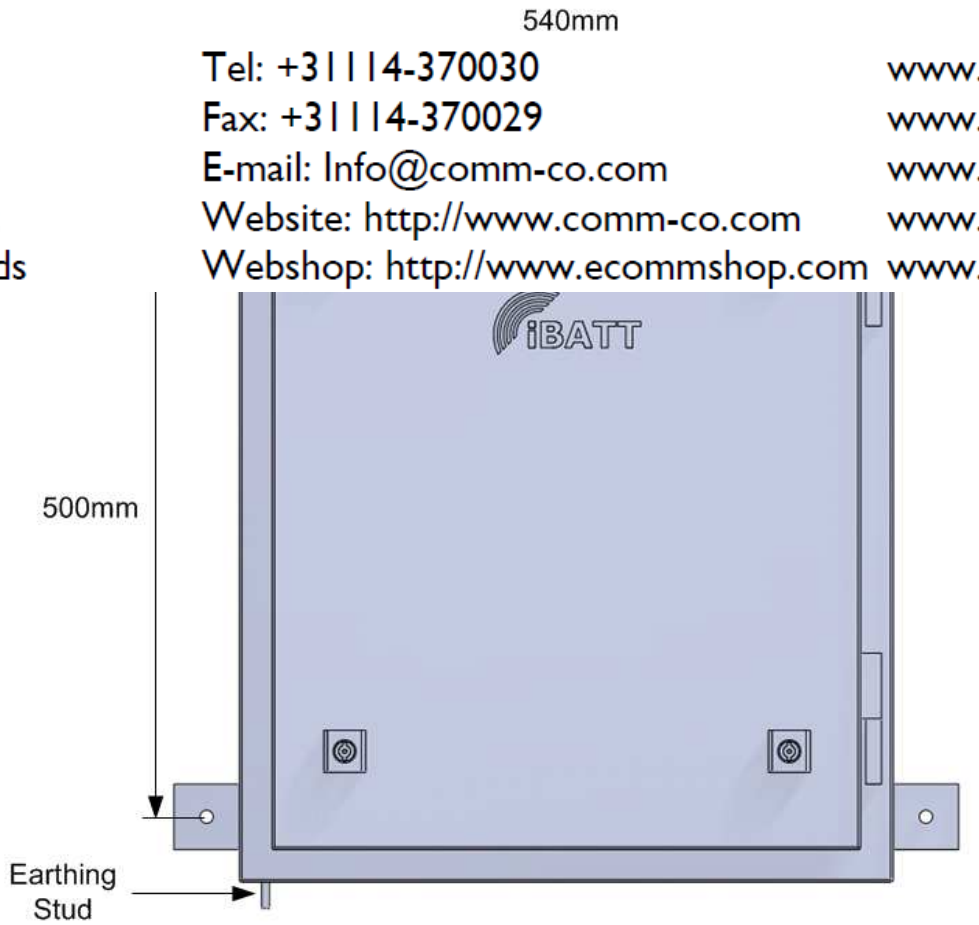


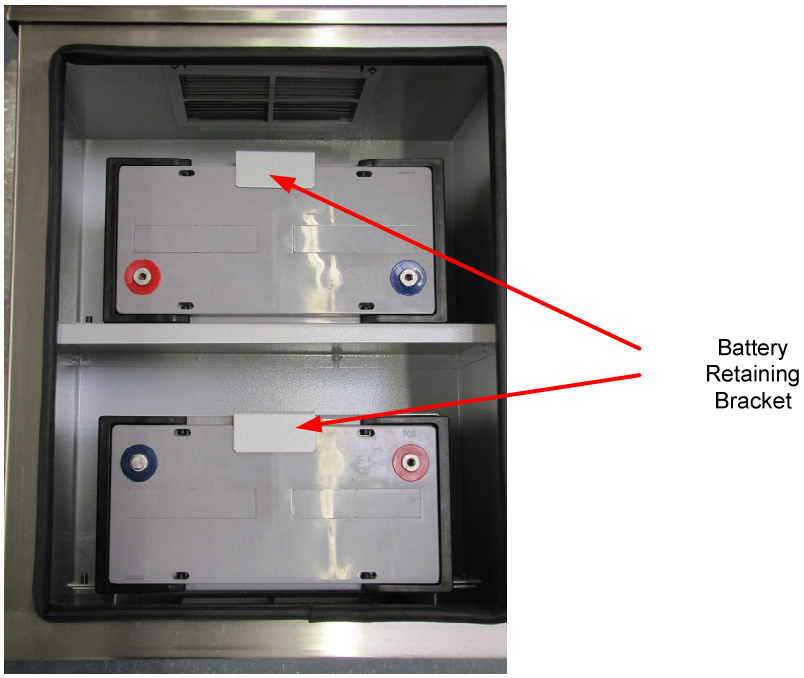
Fig 3.0

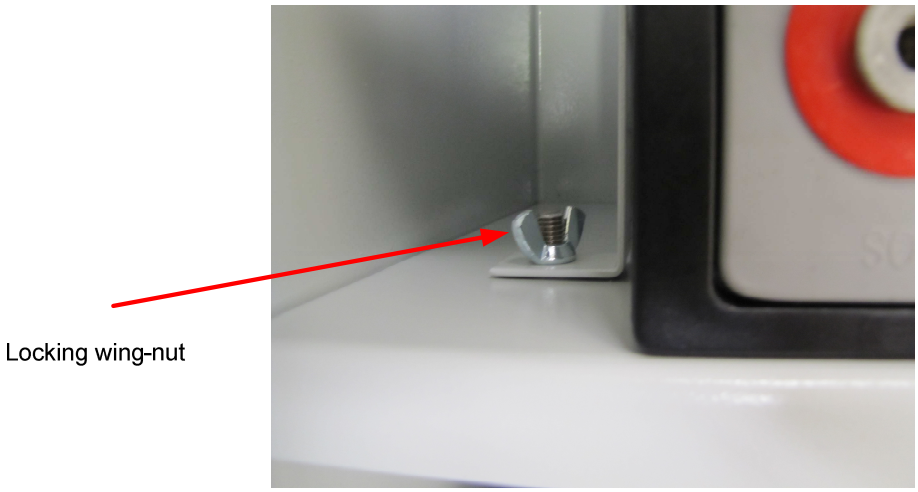
3.2 Fitting the Batteries

Once the enclosure is mounted, the batteries need to be installed and connected as per the diagrams below before the unit can be powered up.

Warning!	**AT ALL TIMES TAKE GREAT CARE NOT TO SHORT THE LEAD ACID BATTERY TERMINALS, OR SUBJECT THE BATTERIES TO ANY MECHANICAL SHOCK.**

Place the batteries into the enclosure as shown in the diagram below, and fit the battery retaining bracket and associated wing-nuts to secure the batteries:





3.3 Fitting the Cables

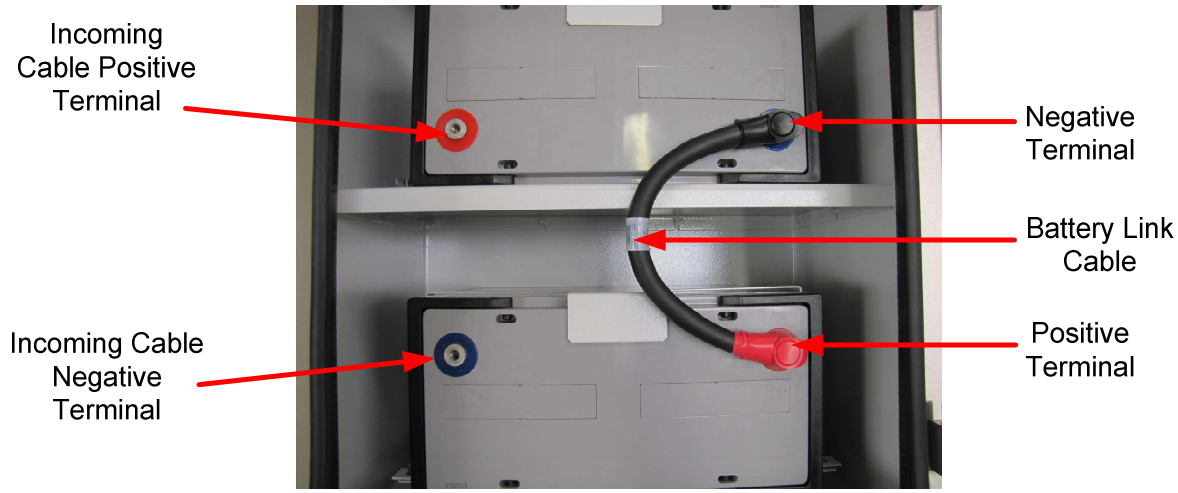
Entries to the enclosure for cable glands are threaded type. Any Entries that are not used must be blanked off with a suitably certified Ex ‘e’ blanking plug.

If the batteries are to be disconnected in a hazardous area, then an appropriately certified means of isolation must be provided.

The iBATT100 is supplied with:

1x Battery link cable
4x M8 bolt and spring washer parts
4x Terminal insulating boots

Connections are made directly to the batteries as shown below. The cables should be secured using M8 bolts and a spring washer to prevent loosening during service.



3.4 Setting to work

The iBATT100 is designed to be used in association with the iUPS101 Zone 1 UPS system, as this provides a certified control circuit for safe charging of the batteries. Once all cables are connected correctly and inspected the enclosure door should be closed and locked ready for normal operation.

Important!	**Ensure the door is secure, correct cable glands are fitted and the unit device correctly wired and earthed.**

Important!	**Ensure that the door gasket is clean and undamaged before closing the door.**

4 Intended Purpose Usage

Important	**Before setting the units to work, read the technical documentation carefully.**

Important	**The latest version of the technical documentation or the corresponding technical supplements is valid in each case.**

The iBATT100 is built using modern components and is extremely reliable in operation; however it must only be used for its intended purpose. Please note that the intended purpose also includes compliance with the instructions issued by the manufacturer for installation, setting up and service.
Any other use is regarded as conflicting with the intended purpose. The manufacturer is not liable for any subsequent damage resulting from such inadmissible use. The user bears the sole risk in such cases.

4.1 Transportation and Storage

All iBATT100 devices must be so transported and stored that they are not subjected to any excessive mechanical stresses.

4.2 Authorized Persons

Only persons trained for the purpose are authorized to handle the iBATT100; they must be familiar with the unit and must be aware of the regulation and provisions required for explosion protection as well as the relevant accident prevention regulations.

4.3 Cleaning and Maintenance

The iBATT100 has two ventilation filters fitted to prevent the ingress of dust and water. These filters should be inspected periodically, and replaced / cleaned as necessary.

4.4 Safety Precautions

Important	**For the installation, maintenance and cleaning of the units, it is absolutely necessary to observe the applicable regulations and provisions concerned with explosion protection (EN 50014, EN 60079-14:2003) as well as the Accident Prevention Regulations.**

4.5 Cleaning and Maintenance Intervals

The cleaning intervals depend on the environment where the system is installed.

4.6 Aggressive substances and environments

The iBATT100 is not designed to come into contact with aggressive substances or environments, please be aware that additional protection may be required.

4.7 Exposure to external stresses

The iBATT100 is not designed to be subjected to excessive stresses e.g. vibration, heat, impact. Additional protection is required to protect against these external stresses.

The iBATT100 will require additional protection if it is installed in a location where it may be subjected to damage.

4.8 Lead Acid Batteries

The rechargeable valve regulated lead acid batteries contained within the iBATT100 have an operational life of up to 10 years dependant on charge/discharge cycles and ambient temperature conditions. These batteries may be changed in the field by the customer under safe area conditions. Please note it is essential that this work is carried out by a competent person and care must be taken not to short the +/- terminals of the batteries.

5 Technical Data

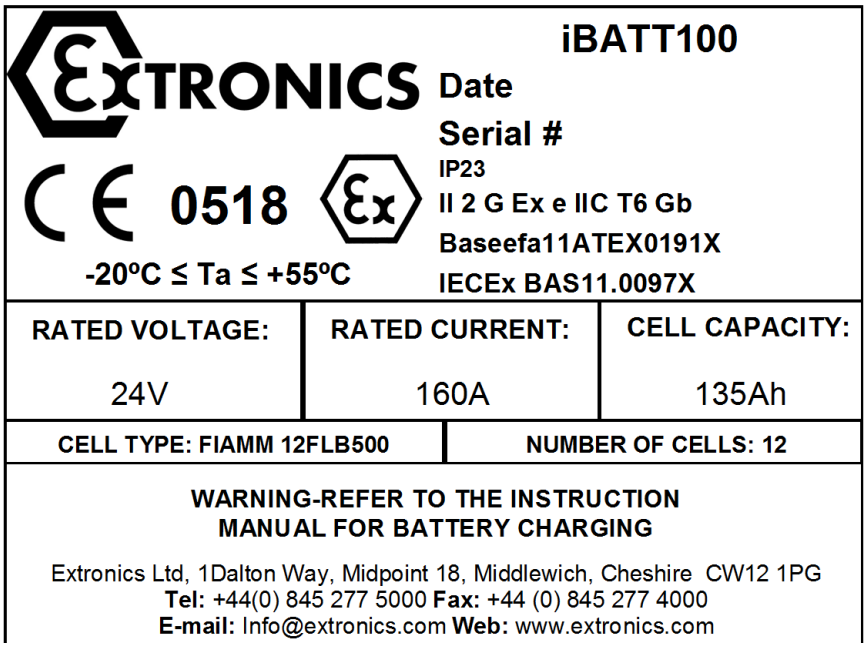
5.1 Specification

Input Voltage	24Vdc (18-36Vdc)
Output Voltage	24Vdc (18-36Vdc)
Maximum Discharge Current	160A
Maximum Charge Current	40A
Enclosure Material	316 Stainless Steel
Weight	Approximately 110 Kg
Enclosure Ingress Protection	IP45*
Environmental	-20ºC to +55ºC
Certification	Ex II 2G Ex e IIC T6 Gb

*ATEX ingress protection is IP23 as the filter material may degrade over long periods of time if not inspected. Providing regular inspection and replacement of this filter material is carried out, then the enclosure protection will remain as IP45

6 Certification

6.1 Certification Label



6.2 ATEX Certificate

Certificate Number
Baseefa11ATEX0191X

Issued 25th August 2011
Page 1 of 2

1 **EC - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3 EC - Type Examination Certificate Number: **Baseefa11ATEX0191X**

4 Equipment or Protective System: **Type iBATT100 Battery Container**

5 Manufacturer: **Extronics Limited**

6 Address: **1 Dalton Way, Midpoint 18, Middlewich, Cheshire, CW10 0HU**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Baseefa, Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No. **GB/BAS/ExTR11.0189/00**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0: 2009 and EN 60079-7: 2007

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include the following :

Ⓔx II 2G Ex e IIC T6 -20°C ≤ T_a ≤ 55°C Gb IP23

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. **3700**

Project File No. **11/0072**

This certificate is granted subject to the general terms and conditions of Baseefa. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

Baseefa
Rockhead Business Park, Staden Lane,
Buxton, Derbyshire SK17 9RZ
Telephone +44 (0) 1298 766600 Fax +44 (0) 1298 766601
e-mail info@baseefa.com web site www.baseefa.com
Baseefa is a trading name of Baseefa Ltd
Registered in England No. 4305578. Registered address as above.

R S SINCLAIR
DIRECTOR
On behalf of
Baseefa

13 **Schedule**

14 **Certificate Number Baseefa11ATEX0191X**

15 Description of Equipment or Protective System

The Type iBATT100 Battery Container consists of a fabricated stainless steel or mild steel enclosure 612mm by 515mm by 371mm with a hinged front cover secured by 4 x ½ turn locks. There are labyrinth vents with foam mesh on the top and bottom side of the enclosure. The inner surface of the enclosure is covered with an epoxy spray coating

The enclosure contains two 12 volt lead acid batteries connected in series with a rated capacity of 135Ah. The maximum charging current is 40.5A and the maximum discharge current is 160A. The batteries sit horizontally on shelves and are clamped in place.

16 Report Number

GB/BAS/ExTR11.0189/00

17 Special Conditions for Safe Use

1. If charging takes place within the hazardous area the charging circuit must meet the requirements of EN 60079-7 and have its own appropriate ATEX certification. The maximum charging current must be limited to 40.5A.
2. Any load connected to these batteries must include a 160A fuse in the supply line. If the fuse is located in a hazardous area it must be appropriately certified.
3. If the batteries are to be disconnected in a hazardous area then an appropriately certified means of isolation must be provided.
4. These batteries must not be subjected to mechanical shock.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
330521	1	REL01	25/8/11	General arrangement
331444	1	01	12/8/11	Label

These drawings are common to and held with IECEx BAS11.0097X

6.3 IECEx Certificate

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BAS 11.0097X	issue No.:0	Certificate history:
Status:	**Current**		
Date of Issue:	**2011-08-25**	Page 1 of 3	

Applicant: **Extronics Limited**
1 Dalton Way
Midpoint 18
Middlewich
Cheshire
CW10 0HU
United Kingdom

Electrical Apparatus: **Type iBATT100 Battery Container**
Optional accessory:

Type of Protection: **Increased safety**

Marking: **Ex e IIC T6 -20°C ≤ Ta ≤ 55°C GbIP23**

Approved for issue on behalf of the IECEx Certification Body: R S Sinclair

Position: Managing Director

Signature:
(for printed version)

Date: 25-8-11

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Baseefa
Rockhead Business Park
Staden Lane
Buxton
Derbyshire
SK17 9RZ
United Kingdom

Baseefa

IECEx Certificate of Conformity

Certificate No.: IECEx BAS 11.0097X

Date of Issue: **2011-08-25** Issue No.: **0**

Manufacturer:

Extronics Limited
1 Dalton Way
Midpoint 18
Middlewich
Cheshire
CW10 0HU
United Kingdom

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
GB/BAS/ExTR11.0189/00

Quality Assessment Report:

GB/SIR/QAR08.0025/02

IECEx Certificate of Conformity

Certificate No.: IECEx BAS 11.0097X

Date of Issue: **2011-08-25** Issue No.: **0**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The Type iBATT100 Battery Container consists of a fabricated stainless steel or mild steel enclosure 612mm by 515mm by 371mm with a hinged front cover secured by 4 x ½ turn locks. There are labyrinth vents with foam mesh on the top and bottom side of the enclosure. The inner surface of the enclosure is covered with an epoxy spray coating

The enclosure contains two 12 volt lead acid batteries connected in series with a rated capacity of 135Ah. The maximum charging current is 40.5A and the maximum discharge current is 160A. The batteries sit horizontally on shelves and are clamped in place.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. If charging takes place within the hazardous area the charging circuit must meet the requirements of IEC 60079-7 and have its own appropriate IECEx certification. The maximum charging current must be limited to 40.5A.

2. Any load connected to these batteries must include a 160A fuse in the supply line. If the fuse is located in a hazardous area it must be appropriately certified.

3. If the batteries are to be disconnected in a hazardous area then an appropriately certified means of isolation must be provided.

4. These batteries must not be subjected to mechanical shock.

6.4 EC Declaration of Conformity

EC Declaration of Conformity

Extronics Ltd, 1 Dalton Way, Midpoint 18, Middlewich, Cheshire, CW10 0HU, UK

Declare under sole responsibility that the product,

iBATT100

To which this declaration relates is in accordance with the provision of the following directives

94/9/EC Equipment and protective systems intended for use in potentially explosive atmospheres.

EC type Examination Certificate	**[Baseefa11ATEX0191X]**
Provisions of Directive fulfilled by the equipment	**[Ex II 2 G Ex e IIC T6 Gb]**
Notified Body for EC Type Examination	**[Baseefa, Rockhead Bus. Park, SK17 9RZ]**
Notified Body for production	**SIRA, 0518, Sira Chester UK**

And is in conformity with the following standards or other nominative documents

EN60079-0:2006	Electrical apparatus for potentially explosive gas atmospheres – General requirements
EN60079-0:2009	Explosive atmospheres - Part 0: Equipment - General Requirements
EN60079-7:2003	Electrical apparatus for explosive gas atmospheres – Increased safety 'e'
EN60079-7:2007	Explosive atmospheres - Part 7: Equipment protection by increased safety 'e'
EN60529:1991	Degrees of protection provided by enclosures (IP Code)

Signed

Nick Saunders
Technical Services Manager

2nd September 2011

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Incorporated in England and Wales. Registration No. 3076287

7 Manual Revision

Revision	Description	Date	By
REL01	First Issue	30/09/2011	A. Peek
01	Approved Document	18/10/2011	B. Seaby
02	Changed entries to threaded and deleted batteries supplied in enclosure	15/02/2012	

Company Info:
Comm-Co
Kreekzoom 9
4561 GX Hulst
The Netherlands

Tel: +3111 4-370030
Fax: +3111 4-370029
E-mail: Info@comm-co.com
Website: http://www.comm-co.com
Webshop: http://www.ecommshop.com

www.atexshop.com
www.ruggedshop.nl
www.webpainter.nl
www.wavecomblog.com
www.eyecctv.nl